DOCUMENT RESUME

ED 206 765 UD 021 614

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TITLE The Effects of Anti-Black Attitudes and Fear of Rape on Accuracy for the Recognition of Black and White Faces: Another Step Beyond the Layperson's Knowledge.
PUB DATE 81
NOTE 23p.

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS *Blacks; *Fear; *Females; *Racial Attitudes; *Rape; Visual Discrimination; *Whites

ABSTRACT

It was hypothesized that young white women who held antiblack attitudes and who were most fearful of being raped would be less accurate in recognizing photographs of black faces than of white faces, in comparison with young white women without these attitudes and fears. Subjects completed a racial attitude scale and a question measuring their fear of being raped; subsequently they participated in a photograph recognition task involving repeated observation of photos of black and white males and females. Photographs of whites were more accurately recognized than those of blacks, confirming previous findings. Using a signal detection procedure, it was found that, in addition, antiblack subjects exhibited a significant difference in their inability to recognize black faces. There was also a trend toward those subjects who were most fearful of being raped being better able to recognize white faces than black faces. The findings of the test have implications for the accuracy of eyewitness identification, especially in rape cases. (Author/APM)

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ED206765

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by

David B. Mack, Jeff Greenberg, and Lawrence S. Wrightsman

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UD021614

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The Effects of Anti-Black Attitudes and Fear of Rape on Accuracy for the Recognition of Black and White Faces: Another Step Beyond the Layperson's Knowledge

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(1981)

Running head: Eye Witness Identification

Abstract

It was hypothesized that young White women who held anti-Black attitudes and who were most fearful of being raped would be less accurate in recognizing photographs of Black faces than of White faces, in comparison with young White women without these attitudes and fears. Subjects completed a racial attitude scale and a question measuring their fear of being raped; subsequently they participated in a photograph recognition task involving repeated observation of photos of Black and White males and females. Photographs of Whites were more accurately recognized than of Blacks, confirming previous findings. Using a signal detection procedure, it was found that only in the case of anti-Black subjects was there a significant difference in ability to recognize White faces versus Black faces. There was a trend toward those subjects who were most fearful of being raped being better able to recognize White faces than Black faces. Implications for the accuracy of eyewitness's identification, especially in rape cases, were discussed.

The initial motivation for the present study came from an action by a district court judge which denied the third author the opportunity to serve as an expert witness in a rape trial (Wrightsman, 1979). In this trial, the defendant was a Black man accused of raping a White woman. About 10 p.m. on a Friday night, the White woman had been walking down the middle of the street, because she had been told that she was safer from rapists there than on the sidewalk. As she passed a parked car, a Black man grabbed her, and threatened her with a knife. He drove her to the outskirts of the city, where he raped her. The victim was unable to identify the attacker from a set of photographs immediately after reporting the attack, but three months later, when shown two new sets of photographs, she selected the defendant as the attacker. The defendant's photograph was the only one common to two sets of photographs of Blacks shown to the victim on the second occasion.

The third author was asked by the counsel for the defense to testify regarding the accuracy of eyewitness's identification, particularly under stress. In denying this request, the presiding judge ruled that such information was within the experience of the average person; that is, "that people in general, i.e., jurors, could fully assess the accuracy of a victim's identification ability," and hence that the testimony of an expert witness was unnecessary.

Contrary to this assertion, Levine and Tapp (1973) have pointed out that the commonsense knowledge of laypersons regarding the accuracy of eyewitness identifications conflicts with expert knowledge. Interestingly enough, a number of legal scholars have suggested that

erroneous eyewitness identifications have been responsible for far more miscarriages of justice than any other factor (e.g., Frank & Frank, 1957; Houts, 1956; Sobel, 1972). Thus, while eyewitness identifications are important determinants of criminal convictions, research indicates that under a variety of circumstances the average person is very inaccurate at making such identifications (Buckhout, 1975; Buckhout et al., 1974; Laughery, Alexander, & Lane, 1971; Levine & Tapp, 1973; Wall, 1965).

Psychologists and legal scholars agree that identifications by eyewitnesses should be viewed with well-informed skepticism (for further discussion, see Gardner, 1933; Levine & Tapp, 1973; Sobel, 1975). Yet, judges continue to resist the introduction of expert testimony on the accuracy of eyewitness identifications. Sobel (1975) suggests that this reluctance may result from the belief that the study of this phenomenon has not been sufficiently established to have gained acceptance within the field of psychology (see Buckhout, 1976). In an effort to enhance our understanding of the factors that affect the accuracy of eyewitness identification, and thereby strengthen our claims of reliable expert knowledge of this phenomenon, a number of studies have been conducted by the Jury Research Project at the University of Kansas (Wrightsman, 1979). The present study is one of them.

The rape case we discussed at the outset suggested to us a number of factors that may serve to inhibit accurate eyewitness identifications. Of course, the race of the attacker may be one such factor. Indeed, Brigham and Barkowitz (1978) have found that whites are less

accurate at recognizing Black faces than at recognizing White faces. Since the attacker was Black, another important factor may be the racial attitude of the eyewitness. It has been hypothesized that Whites with negative attitudes toward Blacks are particularly poor at recognizing Black faces. However, Brigham and Barkowitz (1978) have found no correlation between racial attitude and accuracy for recognition of Black faces. The present study once more considers this issue: Based on their scores on the Multifactor Racial Attitude Inventory (Brigham, Woodmansee,& Cook, 1976), White female participants will be assigned to one of three groups: Positive, Moderate, or Negative in their attitudes toward Blacks. Thus, we will again investigate the possibility that Whites with especially negative attitudes toward Blacks are particularly poor at recognizing Black faces.

Finally, it occurred to us that since one common belief about rapists is that they are more likely to be Black than White (Feild, 1978), women who are particularly fearful of rape may be especially poor at discriminating between Black faces. When a White woman is worried about rape, the sight of a Black man may serve as a signal of potential rape and thus, his particular facial features, which contain less pertinent information, are ignored. As a preliminary investigation of this possibility, we will examine the recognition accuracy (for Black and White faces) of White women with different levels of fear of rape.

In summary, we are proposing that although White women in general will be less accurate in recognizing Black faces than in recognizing

White faces, those women who are negative in their attitudes toward Blacks and those women relatively high in fear of rape will be especially poor at discriminating between Black faces. They will demonstrate the phenomenon of "they all look alike" reflected in the literature (Seeleman, 1940; Brigham & Barkowitz, 1978).

Method

Overview

To determine if White women who were fearful of being raped and were anti-Black were less able to distinguish between Blacks' photographs, we administered attitude scales to 91 White females who were completing a research-participation requirement for an introductory psychology course. These subjects then completed a photograph-recognition task developed by Brigham and Barkowitz (1978).

Measures and Apparatus

A total of 64 black-and-white facial photographs (converted to slides) were selected from two high school yearbooks, 16 in each of 4 race-sex categories: White males, Black males, White females, and Black females. The slides were identical to those used in a previous study (Brigham & Barkowitz, 1978). The only restriction on the randomness of selection of the photographs was that, as in the previous research, photographs in which the person showed a markedly unusual facial expression or wore eyeglasses or a great deal of jewelry were omitted. Twenty slides, 5 in each of the 4 race-sex categories, were randomly selected from these 64 slides and designated as target slides.

A 15-item short form of the Multifactor Racial Attitude Inventory (MRAI) (Brigham, Woodmansee, & Cook, 1976; Woodmansee & Cook, 1967)

was used to measure the predisposing racial attitude. To tap level of fear of rape, the following question was asked: "How often do you worry about being raped?" The responses could range from "never" (1) to "almost all the time" (5).

Subjects

Subjects were 91 White female undergraduates at a large, predominantly White midwestern college. Subjects received course credit for their participation. Subjects took part in the study in groups ranging in size from 5 to 15.

Procedure

To generate trust and honesty subjects were assured of the anonymity of their responses. Subjects completed the MRAI and the Fear of Rape Question prior to the picture-recognition task. The 20 target slides were randomly ordered and presented to subjects; each slide was presented for 2 seconds, with an interstimulus interval of 0.8 seconds. After a five minute break, during which subjects completed the California F Scale, all 64 slides (randomly ordered) were viewed at the rate of 8 seconds per slide. The subjects were asked to rate their recognition of each of the 64 slides on a scale from 1 ("certain that it was not seen before") to 6 ("certain that it was seen before"). All subjects were forewarned as to their task. The purpose of the study was then explained to all of the subjects.

Results

In order to assess the effects of racial attitude, subjects were assigned to one of three groups based on their scores on the MRAI. Subjects who scored 50 or less were considered to be positive in their

attitudes toward Blacks; subjects who scored between 51 and 59 were considered to be moderate in their attitudes toward Blacks; finally, subjects who scored 60 or greater were considered to be negative in their attitudes toward Blacks. The cut-points were chosen so as to allow the most nearly equal group sizes possible.

The fear of rape measure consisted of scores ranging from 1 to 5, but very few respondents chose 3, 4, or 5, so the scale was dichotomized such that respondents who chose 1 were considered low in fear of rape and subjects who selected responses 2 to 5 were considered high in fear of rape.

Consistent with previous research in this area (e.g., Brigham & Barkowitz, 1978), subjects' responses to the recognition scale were dichotomized into correct identifications and false identifications. From these data, a d' score was calculated for each subject for each type of slide. d' is an index of recognition accuracy (derived from signal detection theory) that measures the superiority of recognition performance over chance levels; a d' value of 0.00 indicates a performance equivalent to that expected by chance (see Banks [1970] for a discussion of d'). Values of d' were obtained from tables found in Elliot (1964). Each subject yielded four d' scores, one for each type of slide presented.

A 3(attitudes toward Blacks) by 2(fear of rape) by 2(race of slide) by 2(sex of slide) between-within analysis of variance was performed on the d' scores. As expected, the White slides were more accurately recognized than the Black slides, means of 1.92 and 1.60 respectively, $F(1,85) = 5.11$, $p<.03$. A significant interaction between attitude

toward Blacks and race of slide was also found, $F(2,85) = 3.16$, $p<.05$; the cell means relevant to this interaction can be seen in Table 1. The mean d' score for the White slides was significantly greater than the mean d' score for the Black slides only for the subjects with negative attitudes toward Blacks, means of 2.01 and 1.39 respectively, $t(31) = 2.53$, $p<.01$. Thus, the interaction effect primarily reflects the tendency for the subjects with negative attitudes toward Blacks to more accurately recognize slides of White faces than slides of Black faces. This analysis revealed no other significant effects.

Insert Table 1 about here

To enhance our understanding of this phenomenon, an analysis utilizing subjects' raw responses to the 6-point recognition scale was also performed. This analysis allows all of the information provided by the scale to be utilized and also allows the independent inspection of the relative accuracy of subjects' recognitions for slides they had seen before and for slides they had not seen before.

Thus, a 3(attitude toward Blacks) by 2(fear of rape) by 2(race of slide) by 2(sex of slide) by 2(whether or not the slide had actually been seen before) analysis of variance was performed. Since the scale ranged from "certain have not seen before" (1) to "certain have seen before" (6), scores for the slides that had not been seen before were inverted (subtracted from 7) so that a high score is always indicative of good recognition accuracy.

Consistent with the findings for the d' measure, slides of White

faces were judged more accurately than slides of Black faces, means of 4.74 and 4.55 respectively, $F(1,85) = 5.62$, $p<.02$. The race of slide by racial attitude interaction was also found to be significant, $F(2,85) = 3.29$, $p<.05$. The means relevant to this interaction can be seen in Table

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Insert Table 2 about here

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2. Once again, pairwise t-tests reveal that only the subjects with negative attitudes toward Blacks are significantly more accurate at recognizing White faces than at recognizing Black faces, means of 4.84 and 4.51 respectively, $t(31) = 2.14$, $p<.05$. This analysis also revealed an interaction between the race of slide and whether the slide had actually been seen before, $F(1,85) = 48.99$, $p<.0001$; the cell means for this interaction can be seen in Table 3. T-tests found that while Black slides that had been seen before tended to be recognized better than White slides that had been seen before (means of 4.40 and 4.16 respectively, $t(89) = 1.97$, $p<.10$), White slides that had not been seen before were judged much more accurately than Black slides that had not been seen before (means of 5.33 and 4.71 respectively, $t(89) = 5.10$, $p<.0001$). Thus, while subjects tended to recognize Black slides they had seen before more than White slides they had seen before, they also erroneously recognized Black slides they had not seen before much more so than White slides they had not seen before. Generally, subjects were more accurate at judging slides they had not seen before than at judging slides they had seen before, means of 5.02 and 4.28 respectively, $F(1,85) = 66.49$, $p<.0001$.

Insert Table 3 and Table 4 about here

Finally, this analysis did detect a trend toward the expected interaction between fear of rape and race of slide, $F(1,85) = 3.40$, $p<.07$; the means for this interaction can be seen in Table 4. Pairwise t-tests revealed that only subjects high in fear of rape were better at recognizing White slides than at recognizing Black slides, means of 4.76 and 4.52 respectively, $t(65) = 2.19$, $p<.025$.

Discussion

Our results support the contention that, in general, Whites are less able to discriminate between Black faces than between White faces. However, our findings also suggest that this phenomonon is especially pronounced among White women who hold negative attitudes toward Blacks. There may be a number of reasons for this. Since such Whites are likely to dislike Blacks, they may simply not attend as much to the photographs of Blacks. This possibility could be investigated by a study that permits participants to determine their own length of viewing time for pictures of Black and White faces. Alternately, the factor that leads to especially inaccurate identifications of Blacks by White women with negative attitudes toward Blacks may be what is attended to rather than the length of time of attending. Whites with negative attitudes toward Blacks may only focus on the racial membership of a Black person and thus not perceive or not store in memory the unique characteristics (that every human being possesses) of the Black person. That a photograph is of a Black may be all a prejudiced person needs to know to establish his

or her evaluation of the individual. In contrast, for a photograph of a White person, such features as hair color, facial structure, etc., may be important factors for evaluation. Indeed, it has been found that prejudice against an outgroup is associated with deindividuation of the group's members (Hamilton & Bishop, 1976; Wilder, 1978).

This explanation receives further support from the pattern of data for the accuracy of our participants at recognizing Black and White faces they had or had not seen before. In actuality, Black faces that had been seen before were recognized somewhat more accurately than White faces that had been seen before. The overall lower accuracy for Black faces was due entirely to the White women falsely recognizing Black faces they had not seen before more than White faces they had not seen before. This finding suggests a recognition strategy that entails much less stringent criteria for perceiving recognition of Black faces than for perceiving recognition of White faces. Thus, when a White woman who has witnessed a crime by a Black is asked whether an innocent Black shown in a photograph was the perpetrator of the crime, she is much more likely to mistakenly identify the innocent person than if a White person had committed the crime and she was asked to identify an innocent White shown in a photograph. This point may have serious implications for cases such as the rape case that inspired this study; furhter investigation of the recogniti strategies used to identify Blacks and Whites is clearly needed to determine the extent of this problem.

We did detect a nearly significant interaction for the raw accuracy scores such that only those subjects high in fear pe tended to be less accurate at recognizing Black faces than White faces. Though only

a trend, this result suggests that fear of rape may indeed be a factor affecting the accuracy of eyewitness identifications of Blacks. Of course, there may have been some other individual difference that is associated with fear of rape that is really the cause of the interaction we found. Also, in light of the restricted range of responses to the question we asked to measure fear of rape, it is quite likely that dispositional differences in fear of rape are minimal in comparison to the levels of fear of rape that various situations may evoke. Given these methodological problems, a study that evoked a mild fear of rape in some participants and then examined recognition accuracy for Blacks and Whites would be a better test of the hypothesis that fear of rape may inhibit perception of the unique features of a Black attacker that would prevent false identifications of innocent Blacks.

Finally, it should be noted that this study is most relevant to the effects of race and attitudes on the photographic identification procedures that are sometimes used to identify alleged criminals; however our findings do suggest possible effects of race and attitudes on accuracy of identifications using the lineup procedure as well. Still, research on these issues utilizing a situation more analogous to the lineup procedure is in order.

We believe that if the body of research to date on accuracy of eyewitness identifications points to one strong conclusion, it is that there are many psychological factors that substantially inhibit accurate eyewitness identifications. The Senate Committee on the Omnibus Crime Control and Safe Streets Act of 1968 called eyewitness testimony "an essential prosecutorial tool" (cited in Brigham & Giesbrecht, 1977). Thus, it is

imperative that we strive toward a more thorough understanding of the factors affecting eyewitness identifications in the hope that soon the judicial system will recognize that we do indeed possess pertinent expert knowledge in this area which should be used to supplement the average person's assessments of the accuracy of eyewitness identifications. Only then will we be confident that this essential tool of prosecution is an essential tool of justice as well.

References

Brigham, J. C., & Barkowitz, P. Do "They all look alike?" The effect of race, sex, experience, and attitudes on the ability to recognize faces. Journal of Applied Social Psychology, 1978, 8, 206-218.

Brigham, J. C., & Giesbrecht, L. W. Psychological Factors in Eyewitness Identification, unpublished grant proposal, 1977.

Brigham, J. C., Woodmansee, J., & Cook, S. Dimensions of verbal racial attitudes: Interracial marriage and approaches to racial equality. Journal of Social Issues, 1976, 32(1), 9-21.

Buckhout, R. Nearly 2,000 witnesses can be wrong. Social Action and the Law Newsletter, 1975, 2(3), 7.

Buckhout, R. Eyewitness testimony. Scientific American, 1974, 231(6), 23-31.

Buckhout, R. Nobody likes a smartass: Expert testimony by psychologists. Social Action and the Law Newsletter, 1976, 3(4), 41-50.

Buckhout, R., Figueroa, D., & Hoff, Z. Eyewitness identification. Effects of suggestion and bias in identification from photographs. Bulletin of the Psychonomic Society, 1975, 6, 71-74.

Feild, H. S. Attitudes toward rape: A comparative analysis of police, rapists, crisis counselors, and citizens. Journal of Personality and Social Psychology, 1978, 36, 156-179.

Frank, J., & Frank, B. Not guilty. New York: Doubleday, 1957.

Galper, R. E. Functional race membership and recognition of faces. Perceptual and Motor Skills, 1973, 37, 455-462.

Gardner, D. S. The perception and memory of witnesses. Cornell Law Review, 1933, 391-409.

Hamilton, D. L., & Bishop, G. D. Attitudinal and behavioral effects of initial integration of white suburban neighborhoods. Journal of Social Issues, 1976, 32, 47-67.

Houts, M. From evidence to proof. Springfield, Ill.: Charles C. Thomas, 1956.

Laughery, K. R., Alexander, J. F., & Lane, A. B. Recognition of human faces: Effects of target exposure time, target position, and type of photograph. Journal of Applied Psychology, 1971, 55, 477-483.

Levine, F. J., & Tapp, J. L. The psychology of criminal identifications: The gap from Wade to Kirby. University of Pennsylvania Law Review, 1973, 121, 1079-1131.

Malpass, R. S., Lavigueur, H., & Weldon, D. E. Verbal and visual training in face recognition. Perception and Psychophysics, 1973, 14, 285-292.

Seeleman, V. The influence of attitude upon the remembering of pictorial material. Archives of Psychology, 1940, 36(258), 6-69.

Sobel, N. R. Eyewitness identification: Legal and practical problems. New York: Clark Boardman Co., 1972.

Sobel, N. R. 1976 Supplement to eyewitness identification: Legal and practical problems. New York: Clark Boardman Co., 1975.

Wall, P. Eyewitness identification in criminal cases. Springfield, Ill.: Charles C. Thomas, 1965.

Wilder, D. A. Reduction of intergroup discrimination through individuation of the out-group. Journal of Personality and Social Psychology, 1978, 36, 1361-1374.

Wrightsman, L. S. The psychologist as expert witness. Paper presented at the American Psychological Association convention. New York City, September 1979.

Footnotes

[1]Portions of the research reported herein were funded by a University of Kansas General Research Fund grant (#3471-00-0038) to Lawrence S. Wrightsman. The authors wish to express their thanks to John C. Brigham for providing the slides used in the photograph-recognition task.

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Table 1

Mean d' scores

		Racial Attitude		
		Positive	Moderate	Negative
Race of Slide	Black	1.68	1.77	1.39
	White	1.93	1.81	2.01

Table 2

Mean Accuracy Scores

		Racial Attitude		
		Positive	Moderate	Negative
Race of Slide	Black	4.63	4.54	4.51
	White	4.73	4.66	4.84

Table 3

Mean Accuracy Scores

Whether slide had been seen before

		Seen	Not seen
Race of Slide	Black	4.40	4.71
	White	4.16	5.33

Table 4

Mean Accuracy Scores

		Fear of Rape: Low	Fear of Rape: High
Race of Slide	Black	4.64	4.52
	White	4.70	4.76